United States Patent [19]

Cho et al.

[56]

Patent Number: [11]

5,826,883

Date of Patent: [45]

Oct. 27, 1998

[54]	SEALING RING WITH DEFORMABLE		
	TUBULAR SHEATH FILLED WITH		
	PERMANENT MAGNETIC GRANULES AND		
	METHOD OF MAKING THE SAME		

[75] Inventors: Chahee P. Cho; William P. Krol, Jr., both of Portsmouth; Antonio M. Amaral, East Providence, all of R.I.

[73] Assignee: The United States of America as represented by the Secratary of the Navy, Washington, D.C.

[21] Appl. No.: 715,263 Sep. 16, 1996 Filed: [22] [51] Int. Cl.⁶ F16J 15/53 U.S. Cl. 277/80; 277/229; 277/901 Field of Search 277/1, 80, 201. 277/226, 229, 901, DIG. 9; 49/478.1

References Cited

U.S. PATENT DOCUMENTS

2,619,693	12/1952	Harle 49/478.1
2,919,943	1/1960	Kimm 277/80
3,124,725	3/1964	Leguillon 49/478.1
3,661,197	5/1972	Peterson 277/226

4,252,328	2/1981	Raj et al	
5,014,917	5/1991	Sirocky et al 277/229	

FOREIGN PATENT DOCUMENTS

796595	1/1981	Sweden	***************************************	277/80
815382	3/1981	U.S.S.R.	*************************	277/80

Primary Examiner—Scott Cummings Attorney, Agent, or Firm-Michael J. McGowan; Michael F. Oglo; Prithvi C. Lall

ABSTRACT

There is provided an endless tubular body forming an enclosed chamber therein, and granules of permanent magnet material disposed in the chamber. The body is deformable by the granules when the granules are subjected to a magnetic force. With respect to the aspect of the invention wherein seal assembly technology is the center of interest, there are provided a first member of magnetically permeable material and a second member spaced from the first member to define a passageway therebetween, and the above described sealing ring is disposed in the passageway between the first and second members and in engagement therewith. With respect to the aspect of the of the invention wherein the technology of making a seal assembly is the center of interest, there is provided a method for making the above-described seal assembly.

15 Claims, 2 Drawing Sheets

